Patent Attorney's Docket No. <u>000500-285</u>

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re Patent Application of  | )                            |
|--|------------------------------|
| Dan HAUZENBERGER   | ) Group Art Unit: Unassigned |
| Application No.: Unassigned  | ) Prior Examiner: Unassigned |
| Filed: February 21, 2001   | )                            |
| For: A METHOD FOR MEASURING A PATIENT'S ABILITY TO METABOLIZE CERTAIN DRUGS (as amended) | )<br>)<br>)<br>)             |

### INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

The references were cited during the PCT international phase. A copy of the International Search Report is also enclosed.

The documents are being submitted within 3 months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later, therefore no fee or certification is required under 37 C.F.R. § 1.97(b).

Information Disclosure Statement Application No. <u>To be assigned</u> Attorney's Docket No. <u>000500-285</u> Page 2

To assist the Examiner, the references are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Donna M. Meuth

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P.O. Box 1404 Alexandria, Virginia 22313-1404 (703) 836-6620

Date: February 21, 2001

International application No. PCT/SE 99/01449

### A. CLASSIFICATION OF SUBJECT MATTER

# IPC7: C12Q 1/68, C12Q 1/34, C12N 15/11 // C12N 9/02 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C12Q, C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

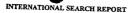
### C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |  |
|-----------|--|-----------------------|--|
| X         | WO 9530766 A1 (THE SECRETARY OF THE DEPARTMENT OF<br>HEALTH AND HUMAN SERVICES), 16 November 1995<br>(16.11.95), page 40, line 27 - line 35; page 42,<br>line 37; page 45, line 14 - line 16 | 16                    |  |
| A         |  | 1-9                   |  |
| <b>A</b>  | WO 9113075 A2 (ORION-YHTYMÄ OY), 5 Sept 1991<br>(O5.09.91), especiale page 4, line 28 - page 5,<br>line 30 and claims  | 1-18                  |  |
|           | <del></del>  | *                     |  |
|           |  |                       |  |
| v Furth   | er documents are listed in the continuation of Box C.  |                       |  |

|                                     | Special categories of cited documents  | ~r-                           | later document published after the international filing date or promise   |  |  |  |
|-------------------------------------|--|-------------------------------|---|--|--|--|
| *A*                                 | document defining the general state of the art which is not considered to be of particular relevance.  |                               | date and not in conflict with the application but cited to understand<br>the principle or theory underlying the inventors   |  |  |  |
| 110                                 | erlier document but published on or after the international filing date  | *X*                           |   |  |  |  |
| 1.                                  | document which may throw doubts on priority diam(s) or which is<br>sited to establish the publication date of another citation or other<br>special resion (as specifical). |                               | step when the document is taken alone   |  |  |  |
| ър.<br>•О,                          |  | ٠٧٠                           | Y document of particular relevance: the claimed invention cannot be<br>considered to involve an inventive step when the document is<br>combined with one or more other such documents, such combinate<br>being physical to a person idelled in the art. |  |  |  |
|                                     | the priority date claimed  |                               | document member of the same patent family   |  |  |  |
| Date                                | e of the actual completion of the international search   | Date o                        | of mailing of the international search report   |  |  |  |
| 21 December 1999                    |  | 17 January 2000 (17.01.00)    |   |  |  |  |
| Name and mailing address of the ISA |  |                               | Authorized officer  |  |  |  |
|                                     | edish Patent Office  |                               |   |  |  |  |
| Box 5055, S-102 42 STOCKHOLM        |  |                               | Patrick Andersson / MR  |  |  |  |
| Fac                                 | simile No. + 46 8 666 02 86  | Telephone No. +46 8 782 25 00 |   |  |  |  |

International application No.

|            |  | CT/SE 99/01449               |
|------------|--|------------------------------|
| C (Continu | ation). DOCUMENTS CONSIDERED TO BE RELEVANT  |                              |
| Category*  | Citation of document, with indication, where appropriate, of the relevant  | t passages Relevant to claim |
| Α .        | File WPI, Derwent accession no. 98138246,<br>SRL KK: "Detecting point mutation in exon 4<br>human cytochrome P450 2C19 gene - comprises<br>carrying out PCR using specific oligio:nucle<br>primers, useful for, e.g. detecting abnormal<br>in S-mephenytoin metabolism"; & JP,a,1001458<br>980120,DW9813 | eotide                       |
| Α -        | Pharmacogenetics, Volume 6, 1996,<br>Michael J. Stubbins et al, ""Genetic analysi<br>the human cytochrome P450 CYP2C9 locus""<br>page 429 - page 439   | 10-15,17-18                  |
|            |  |                              |
| A          | WO 9534679 A2 (THE SECRETARY, DEPARTMENT OF HEAL<br>AND HUMAN SERVICES), 21 December 1995 (21.12   | .TH 10-15,17-18              |
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|            | v 210 (continuation of second sheet) (July 1992)   | İ                            |



International application No. PCT/SE 99/01449

| Box      | I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)  |
|----------|--|
| This     | international assessment of item 1 of first sheet)   |
| 1        | international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:  |
| '- [     | Claims Not.:  because they relate to subject matter not required to be searched by this Authority, namely:   |
|          |  |
| 1        |  |
| ), r     | Claims Nos.:   |
|          | casums vivo.:  because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be earried out, specifically: |
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|          |  |
| Box II   | observations where unity of invention is lacking (Continuation of item 2 of first sheet)   |
| This Ir  | nternational Searching Authority found multiple inventions in this international application, as follows:  |
| see      | extra sheet  |
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| 1.       | As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.   |
| 2.       |  |
|          | As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.   |
| 3.       | As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:                         |
|          |  |
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|          | 5  |
| + □      | No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:             |
|          |  |
|          |  |
| Remark   | on Protest   |
|          | No protest accompanied the payment of additional search fees.  |
| Form PCT | MS A ZIO   |

International application No. PCT/SE 99 01449

According to PCT rule 13.2, an international application shall relate to one invention only or a group of inventions linked by one or more of the same or corresponding "special technical features", i.e., features that define a contribution which each of the inventions, considered as a whole, makes over the

application relates to a method and different sequences (detection primers) from isoforms of cytochrome P450. A special technical feature could be detection primers hybridising immediately adjacent and in 5' in relation to a point mutation in a DNA sequence encoding cytochrome P450 However, such primers are contemplated W095/30766, see e.g. page 40, lines 30-35. Thus, the claimed invention fails to comply with the demand for unity a posteriori .

The following inventions were found:

Invention 1, claims 1-3: Method for determining the ability of cells in a sample to metabolise certain drugs comprising the steps a)-d) in claim 1.

Invention 2, claims 4-6: Detection primers derived from the

sequence in claim 4. Invention 3, claims 7: Detection primers derived from the sequence in claim 7.

Invention 4, claims 8-9: Detection primers derived from the sequence in claim 8. Invention 5, claims 10-11 and 17: Detection primers derived

from the sequence in claim 10 and a kit comprising the primers Invention 6, claims 12 and 17: Detection primers derived from the sequence in claim 12 and a kit comprising the primers. Invention 7, claims 13-14 and 18: Detection primers derived

from the sequence in claim 13 and a kit comprising the Invention 8, claims 15 and 18: Detection primers derived from

the sequence in claim 15 and a kit comprising the primers. Invention 9, claim 16: A kit for detecting a possible point mutation in the cytochrome P450 isoform CYP2C19 comprising a detection primer according to claims 4-9.

In spite of the non-unity all inventions has been searched.

Information on patent family members

International application No. 02/12/99 PCT/SE 99/01449

|    |                                    |    |                     |          | ,, 55                      | 1 01/31 | - 23/01449       |     |
|----|------------------------------------|----|---------------------|----------|----------------------------|---------|------------------|-----|
| P  | atent document<br>d in search repo | rL | Publication<br>date |          | Patent family<br>member(s) |         | Publication date |     |
| WO | 9530766                            | A1 | 16/11/95            | AU       | 2476695                    |         | 29/11/95         |     |
|    |                                    |    |                     | US       | 5912120                    | A       | 15/06/99         |     |
| WO | 9113075                            | A2 | 05/09/91            | AT       | 180019                     | T       | 15/05/99         |     |
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|    |                                    |    |                     | EP       | 0648280                    | A,B     | 19/04/95         |     |
|    |                                    |    |                     | SE       | 0648280                    |         |                  |     |
|    |                                    |    |                     | ES       | 2072235                    |         | 16/07/95         |     |
|    |                                    |    |                     | FI       | 102297                     |         | 00/00/00         |     |
|    |                                    |    |                     | FI       | 923653                     |         | 14/08/92         |     |
|    |                                    |    |                     | GR       | 95300047                   |         | 31/07/95         |     |
|    |                                    |    |                     | HU<br>IL | 211058                     |         | 30/10/95         |     |
|    |                                    |    |                     | Jb<br>Ir | 97222<br>2786011           |         | 31/08/95         |     |
|    |                                    |    |                     | JP       | 5504477                    |         | 13/08/98         |     |
|    |                                    |    |                     | NO       | 923116                     |         | 15/07/93         |     |
|    |                                    |    |                     | NZ       | 237134                     |         | 10/08/92         |     |
|    |                                    |    |                     | PT       | 96776                      |         | 25/06/92         |     |
|    |                                    |    |                     |          |                            |         | 31/10/91         |     |
| MO | 9534679                            | A2 | 21/12/95            | UA       | 2860295 /                  | 4       | 05/01/96         |     |
|    |                                    |    |                     | GB       | 2303853                    |         | 05/03/97         | *** |
|    |                                    |    |                     | GB       | 9412054                    |         | 00/00/00         |     |
|    |                                    |    |                     | GB       | 9502728 [                  |         | 00/00/00         |     |
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|    |                                    |    |                     | US       | 5891633                    |         | 06/04/99         |     |
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